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Milliken & Company
P.O. Box 1927
Spartanburg, SC 29304

EXAMINER

GOLLAMUDI, SHARMILA S

ART UNIT	PAPER NUMBER
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1616

DATE MAILED: 02/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

09/851,042

Applicant(s)

PETREA ET AL.

Examiner

Sharmila S. Gollamudi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 34 and 36-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 34 and 36-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Receipt of Request for Continued Examination and Amendment F filed on September 25, 2003 is acknowledged. Claim **34 and 36-46** are included in the prosecution of this application.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 34 and 37 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 8 of U.S. Patent No. 6,479,144. Although the conflicting claims are not identical, they are not patentably distinct from each other for the following reasons:

US patent claims an antimicrobial spandex fiber containing an antimicrobial compound selected from triclosan, a silver based zeolite, a silver based glass, and mixture thereof. Further, US patent claims the antimicrobial compound in discrete areas of the fiber. Dependent claim 8 recites the exclusion of another organic antimicrobial compound.

Instant application claims an antimicrobial polyurethane film containing silver based inorganic compounds with a certain thickness. Further, the claim recites the antimicrobial compound in discrete areas of the fiber. Dependent claim 37 recites the exclusion of another organic antimicrobial compound.

US patent and instant application are obvious over one another since US patent claims the genus and instant application claims the species. The instant polyurethane species falls within the broad scope of US patent's spandex fiber since US patent defines the term spandex as "any standard polyurethane-type fibers" on column 4, lines 12-13. Therefore, the rejected claims are obvious over one another.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 34, 36, 38-46 are rejected under 35 U.S.C. 102(b) as being anticipated by Katsura et al (5,941,369).

Katsura et al discloses a food-conveying belt. Example 1 discloses a polyurethane resin pellet and an antifungal/antibacterial agent are dry blended. The result mixture is plasticized and extruded into a sheet having a thickness of 0.3mm (11.8 mils). This film is then added to a polyester carcass containing an adhesion agent. Comparative example 2 discloses example 1 wherein silver-zirconium phosphate and antifungal are substituted instead in the polyurethane film.

*Note the examiner bases the rejection on the polyurethane film intermediate product before its addition to the polyester adhesion sheet.

*The anti-tack and cohesive properties are inherent.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 34 and 36-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krall et al (5976562) in view of JP 09002537.

Krall et al disclose a polyurethane film of .25mm thickness with silver. The antimicrobial silver is embedded in and coated onto the polyurethane. (Note example and col. 2, lines 5-15). Krall et al does not include an organic bactericide or additives. Krall teaches the metal compounds are embedded in the plastic in the form of discrete particles. See column 2, lines 5-10 and claim 1. The product may be extruded into shape.

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See column 4, lines 59-67. The instant cohesive and anti-tack properties of the film are inherent.

Krall et al do not teach silver compounds.

JP 09002537 teaches a container exhibiting antimicrobial property incorporating silver based zirconium phosphate. JP teaches silver based zirconium phosphate provides less discoloration and deterioration. The reference teaches resin such as polyurethane. (Note abstract)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Krall et al and JP 09002537 and utilize the instant silver-based antimicrobial compound. One would be motivated to use silver based zirconium phosphate since it provides less discoloration and deterioration as taught by JP 09002537. Further, one would expect similar results since both teach silver-based polyurethane articles to provide an antibacterial effect.

Response to Arguments

Applicant argues that the neither reference teaches the embedding of the silver-based antimicrobial in the polyurethane film. Applicant further argues that Krall's polyurethane pellets are formed through the initial production of a film, then coating of the film with an antimicrobial, melting the film, and extruding the article into the desired shape. It is argued that nowhere does the reference teach a co-extrusion of the polyurethane resin with an antimicrobial to form a thin film of instant thickness. Lastly, the applicant argues that the secondary reference does not teach a film.

Applicant's arguments have been fully considered but they are not persuasive. Firstly, the examiner points out that the applicant is claiming a product; however the applicant is relying on arguments pertaining to the method of making the product. The process in which a product is made does not impart patentability to an invention. See MPEP 2113. Therefore, limitations of processing the product are not considered in a product claim.

Secondly, as pointed out by the applicant, Krall's composition is extruded in the final stage. This is clearly seen in the steps defined by claim 1. Once the silver coated onto the film, it is kneaded wherein the metal particles are *embedded* into the film, and extruded to into the desired shape. This desired shaped may be a film depending on a matter of choice. Applicant is incorrect in the assertion that nowhere does Krall teach embedding the particles in the film. As it has been pointed out several times, clearly on column 2, lines 5-10, Krall teaches that "the active substance is embedded in the plastic in the form of discrete particles." This embedding yields the anti-tack property. The new discovery of a function, i.e. anti-tack property, is not hindsight as argued by applicant. A newly discovered property in a product claim does not hold patentable weight since the prior art product is the same and the newly discovered property is inherent in the prior art product. See *In re Best*.

In regards to the thickness, the examiner points to the example wherein a 0.25 mm polyurethane film is utilized, the conversion of 0.25 into instant units is 9.8 mils. It is the examiner's position that the thickness of the film is easily manipulated and done

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routinely in the art. One would be motivated to do so depending on the thickness desired of the article.

In regards to the secondary reference, the examiner points out that the claims are rejected under obviousness and the secondary reference is relied upon to teach a specific teaching that the primary reference is lacking. In instant case, although Krall teaches generic silver compounds, Krall does not teach the specific silver compounds. Therefore, the examiner relies on JP to cure the deficiency. JP does not have to teach a film since this limitation is covered by Krall. Further, it is pointed out that shape of an article does not impart patentability since changing of the shape is a matter of choice to a skilled artisan.

Claims 34 and 36-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 11-028797 in view of JP 09002537.

JP teaches polyurethane film extruded with an antimicrobial agent, such as silver and antifungal agent (see page 3). The film is then coated onto a thermoplastic resin. The film has a thickness between 10-1000 microns and instant properties. The anti-tack and cohesive properties are inherent.

JP does not teach instant silver agent.

JP 09002537 teaches a container exhibiting antimicrobial property incorporating silver based zirconium phosphate. JP teaches silver based zirconium phosphate provides less discoloration and deterioration. The reference teaches resin such as polyurethane. (Note abstract)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine JP 11-028797 and JP 09002537 and utilize the instant silver compounds. One would be motivated to use silver based zirconium phosphate since it provides less discoloration and deterioration as taught by JP 09002537. Further, one would have a reasonable expectation of success in combining the references since both teach silver-based polyurethane articles to provide an antibacterial effect.

Response to Arguments

Applicant argues that that primary reference does not teach an extruded antimicrobial-embedded thin film. It is argued that JP teaches a polyurethane resin molding having a polyurethane paint composition and the resultant product is a thick resin. Applicant argues that the primary reference does not teach extrusion of any kind. Applicant argues that the secondary reference is directed towards plastic articles.

Applicant's arguments have been fully considered but they are not persuasive. Again, the examiner points out that the claims are directed towards a product claim and the applicant is arguing the method of making the product. The method of making the product does not hold patentable weight in a product claim. The applicant is correct in the fact that the end product of JP is a thick resin molding; however the examiner points out that the polyurethane coat (JP uses the word film also) formed on the polyurethane molding reads on the instant claims. The examiner uses this intermediate product to reject the claims and not the end product of the resin molding. The examiner points to page 4 of the computer translation attached. The polyurethane coat may be fabricated by extrusion method (although the limitation of extrusion does not have patentable

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weight in a product claim) and has a thickness of 10-100 microns. The conversion factor is that 1000 microns = 39 mils. Although, the examples disclose dipping method, the exemplified method does not constitute a teaching away from the broader disclosure that an extrusion method may be used.

Conclusion

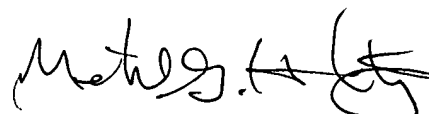
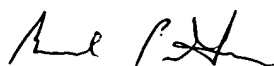
No claim is allowed at this time.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharmila S. Gollamudi whose telephone number is 571-242-0614. The examiner can normally be reached on M-F (8:00-5:00) with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman Page can be reached on 571-272-0602. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SSG



MICHAEL G. HARTLEY
PRIMARY EXAMINER

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February 13, 2004